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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,531	02/12/2004	Mark Charles Davis	IBMS.074PA(0526)	5154

7590 03/02/2006
Chambliss, Bahner & Stophel, P.C.
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Chattanooga, TN 37402

EXAMINER

SCHLIE, PAUL W

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/777,531	Applicant(s) DAVIS ET AL.	
	Examiner Paul W. Schlie	Art Unit 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/12/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-35 have been examined.

Claim Rejections - 35 USC § 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Krum et al. (5,777,845).

As per independent claims 1, 18, 21, 24 and 33, Krum et al. teaches a storage system package, and/or method comprising: a carrier housing for holding multiple storage devices and an aggregating RAID controller (inherently comprising memory and a processing means) proximate to each other and aligned in rows such that the plurality may be configured to appear as at least one single aggregated logical storage unit (being inherent of a so configured multi-drive RAID configuration, where such a controller configured to RAID-0 correspondingly logically stripes data across multiple drives such that any logical block may be deterministically mapped to a corresponding physical block within a particular drive) through a single otherwise standard interface,

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and thereby may correspondingly compose a storage system comprising a plurality of so packaged logical storage units by mounting and providing each with the primary power, control, and signaling as would be correspondingly inherent to any multi-element storage system, inclusive of a RAID configuration if so desired (see abstract, figures 1-7, column 1 lines 41-45, and column 2 lines 25-39) . Where although Krum et al. depicts drives arranged within two rows side-by-side, and the applicant depicts drives arranged within a single row, in consideration that both Krum et al. and the applicant acknowledges that various otherwise obvious modifications may be made to that described and/or illustrated without departing from the spirit and scope of the claimed invention, the difference is considered to be an obvious design choice and not given patentable weight. Any limitation not otherwise explicitly addressed is considered correspondingly clearly inherent in that taught, obvious to one of ordinary skill in the art at the time of the claimed invention, and/or not sufficient to patentably distinguish over prior art.

As per claims 2-17, 19-20, 22-23, 25-32 and 34-35, being dependant on claim 1, 18, 21, 24, 33, or correspondingly dependant claim; Krum et al. further teaches that a spring loaded bracket may hold said storage devices in place (see figures 5-7); that said system may further comprise a battery backup power source (see column 2 lines 38-42), but does not explicitly teach that such a packaged configuration may contain fault indicators or a failure mode of operation which may themselves be powered by said battery backup power, or that such a package may further comprise air channels and/or a cooling device; however the support of a failure mode and corresponding diagnosis

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and recovery is considered inherent in a RAID based controller as taught, and official notice is given that fault indicators are commonly understood and deployed as prior art (as depicted in figure 3 in that taught by Holland et al. 5,367,669 although not explicitly cited as the basis of the rejection), and that heat dissipation by means of providing air based cooling is well understood as prior art as acknowledged by the applicant (see "Description of Prior Art" on page 3 lines 4-7), and thereby both considered an obvious design choice by one of ordinary skill in the art at the time of the claimed invention to include in such a packaged storage unit, for the benefit of enabling the designation of a faulty drive and/or other component within such a system that should be replaced, and/or enable the heat generated within and/or by the package to be dissipated as deemed required; and is further considered inherent that said RAID controller comprising said system may alternatively fully abstract the address of the storage devices which physically comprise the logical storage unit and/or storage system which they may correspondingly compose. Any limitation not otherwise explicitly addressed is correspondingly considered clearly inherent in that taught, obvious to one of ordinary skill in the art at the time of the claimed invention, and/or insufficient to patentably distinguish over prior art.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul W. Schlie whose telephone number is 571-272-6765, or whose email address is [paul.schlie@uspto.gov]. The examiner can normally be reached on Mon-Thu 8:00-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 517-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


PIERRE BATAILLE
PRIMARY EXAMINER
2/24/02